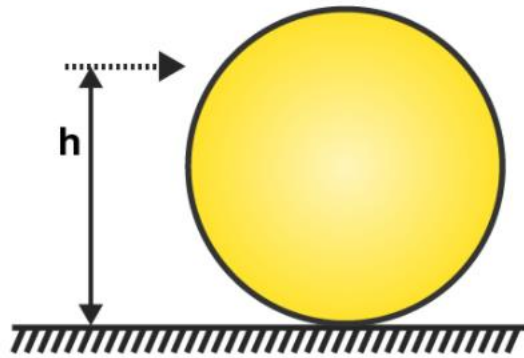


7.18. A uniform sphere of mass  $m$  and radius  $R$  is placed on a rough horizontal surface. The sphere is struck horizontally at a height  $h$  from the floor.



Match the following

a) $h = R/2$	i) sphere rolls without slipping with a constant velocity and no loss of energy
b) $h = R$	ii) sphere spins clockwise, loses energy by friction
c) $h = 3R/2$	iii) sphere spins anti-clockwise, loses energy by friction
d) $h = 7R/5$	iv) sphere has only a translational motion, loses energy by friction

**Answer:**

- a) matches with iii)
- b) matches with iv)
- c) matches with ii)
- d) matches with i)